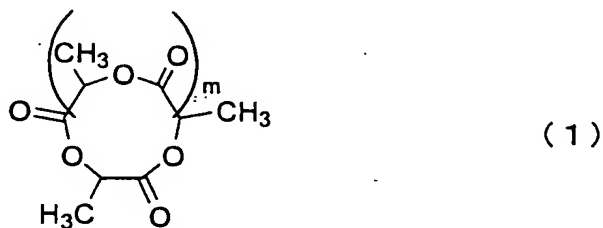


CLAIMS

1. A method for producing a cyclic lactic acid oligomer represented by the following formula (1):



wherein m represents an integer of 1 to 30,

wherein lactides are polymerized in the presence of an alkali metal compound represented by the following formula (2):



wherein R represents an aliphatic group, aromatic group, $-\text{Si}(\text{R}^{10})(\text{R}^{11})(\text{R}^{12})$, $-\text{CH}(\text{R}^{20})\text{CONR}^{21}\text{R}^{22}$ or $-\text{CH}(\text{R}^{30})\text{COOR}^{31}$, wherein each of R^{10} , R^{11} and R^{12} independently represents an aliphatic or aromatic group, R^{20} represents an aliphatic group, each of R^{21} and R^{22} independently represents a hydrogen atom, aliphatic group or aromatic group, R^{30} represents an aliphatic group, and R^{31} represents a hydrogen atom, aliphatic group or aromatic group;

Y represents $-\text{O}-$, $-\text{S}-$ or $-\text{NR}^{40}-$, wherein R^{40} represents a hydrogen atom, aliphatic group or aromatic group; and

Me represents an alkali metal.

2. The method for producing a cyclic lactic acid oligomer according to claim 1, wherein said alkali metal compound is a compound of formula (2) wherein R represents an alkyl group having 1 to 12 carbon atoms, aryl group having 6 to 30 carbon atoms, $-\text{Si}(\text{R}^{10})(\text{R}^{11})(\text{R}^{12})$, $-\text{CH}(\text{R}^{20})\text{CONR}^{21}\text{R}^{22}$ or $-\text{CH}(\text{R}^{30})\text{COOR}^{31}$, wherein each of R^{10} , R^{11} and R^{12} independently represents an aliphatic or aromatic group, R^{20} represents an aliphatic group, each of R^{21} and R^{22} independently represents a hydrogen atom,

aliphatic group or aromatic group, R^{30} represents an aliphatic group, and R^{31} represents a hydrogen atom, aliphatic group or aromatic group.

3. The method for producing a cyclic lactic acid oligomer according to claim 1 or 2, wherein said alkali metal compound is a compound of formula (2) wherein Y is -O- or -S-.

4. The method for producing a cyclic lactic acid oligomer according to any one of claims 1 to 3, wherein said alkali metal compound is a compound of formula (2) wherein Me is lithium.

5. The method for producing a cyclic lactic acid oligomer according to any one of claims 1 to 4, wherein, in formula (1), m is an integer of 1 to 21.

6. The method for producing a cyclic lactic acid oligomer according to any one of claims 1 to 5, wherein said alkali metal compound is any of:
a compound of formula (2) wherein R is an aliphatic group having 4 or more carbon atoms; a compound of formula (2) wherein R is an aromatic group and Y is -S-; or a compound of formula (2) wherein R is $-\text{CH}(\text{R}^{20})\text{CONR}^{21}\text{R}^{22}$ wherein R^{20} represents an aliphatic group and each of R^{21} and R^{22} independently represents a hydrogen atom, aliphatic group or aromatic group.

7. The method for producing a cyclic lactic acid oligomer according to claim 6, wherein cyclic lactic acid oligomer is selectively produced substantially free of chain lactic acid oligomer.

8. A cyclic lactic acid oligomer, which is produced by the method for producing a cyclic lactic acid oligomer according to any one of claims 1 to 7.

9. The cyclic lactic acid oligomer according to claim 8, which is substantially free of chain lactic acid oligomer.